

# California Tsunami Preparedness & Mitigation Program

**2013 Activities**

**(NOAA09-12 Grant)**

**Upcoming Activities**

**(NOAA13 Grant)**

Partners =



# Current Initiatives (support NOAA09 MES tasks)

## 1. Tsunami Preparedness Week

- a. 6 months planning / coordination with NWS, CalOES, CGS, & all 20 coastal counties
- b. Proclamations at the local, state and national levels.
- c. Information Campaign
- d. Tsunami Warning Communications Test:
  - 3 Counties w/Live (TSW) Codes (up to seven systems) – FCC Approval
  - 5 Counties w/airplane flights – Civil Air Patrol
  - 17 Counties w/Test (RMT) Codes – NWS Western Region/WCM's
- e. Pacifex13 table-top exercise
- f. Printing and distribution of tsunami public information materials
- g. Evacuation drills and reverse 911 calling
- h. Workshops, training, presentations, and other special events



# Current Initiatives (support NOAA09 MES tasks)

## 2. Support Local Jurisdictions:

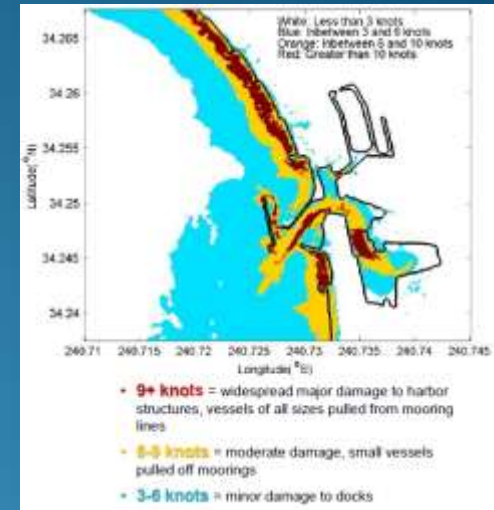
- a. TsunamiReady: (City of Santa Barbara, San Francisco International Airport, Carmel Highlands, and Cypress Grove Marin County, Dillon Beach, Santa Monica, Seaworld San Diego)
  - Site visits / NWS coordination
  - Sign Plans / Field Work / Purchasing
- b. Response / Evacuation Plan Review
- c. Brochure development / provision (cont'd distribution of statewide, community)
  - “How to Survive a Tsunami”
  - “Tsunamis! What Boaters Should Know”
- d. Drills, Exercises, WX Spotter Training, Presentations



# Current Initiatives (support NOAA09 MES tasks)

## 3. Maritime Hazard ID as basis for Planning & Mitigation

- a. Product Development (potential map products)
  - Offshore Safe Depth for Evacuation (1)
  - Damage potential for Piers/infrastructure
    - 3 velocity ranges for 3 alert levels (9)
  - Duration of dangerous currents in harbors (3 velocity ranges)
- b. Guidance recommendations



## 4. Enhanced Emergency Response Planning

- a. Secondary evacuation products (Playbooks)
- b. Enhanced wave height estimation tool (FASTER)

## 5. Probabilistic Tsunami Hazard Analysis (PTHA)

- a. 2 Pilot Projects (Crescent City & Huntington Beach)
- b. Land Use Planning, Building Code Development, Consistent Evacuation Planning

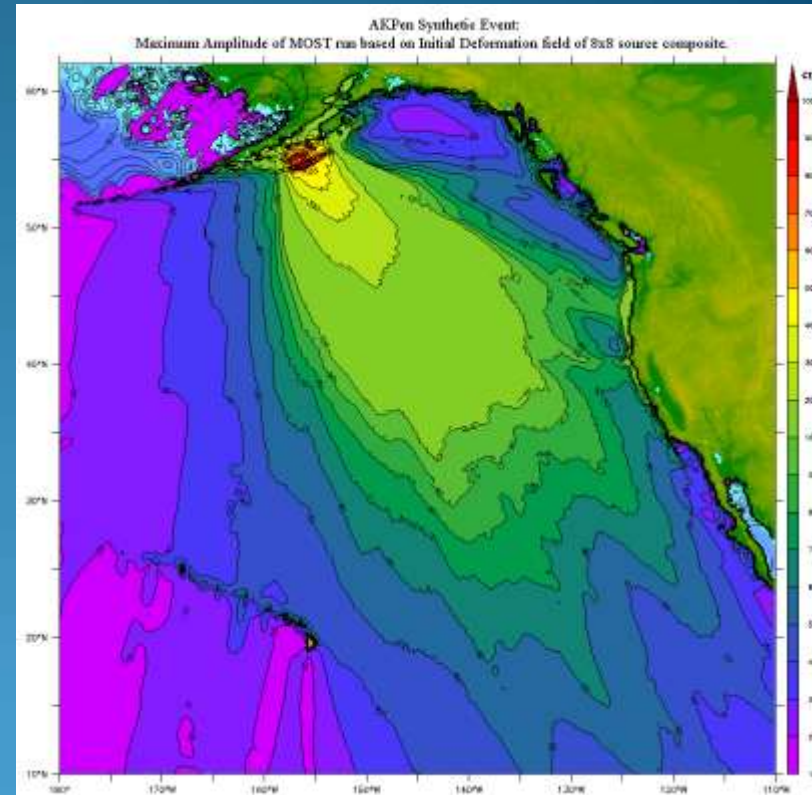




# Current Initiatives (support NOAA09 MES tasks)

## 6. Science Application for Risk Reduction Project

- Single Scenario Implications:
  - Physical Damage,
  - Environmental Impact,
  - Ecological Impact,
  - Economic Impact,
  - Population Vulnerability,
  - Emergency Management,
  - Communication Products,
  - On-Going Mitigation,
  - Cause/Setting Analysis (Source, Modeling, Paleotsunami)
  - Policy



INUNDATION	MARITIME	SCENARIO (Playbooks) / FASTER Tool	PROBABILITY (of occurrence)
Inundation Maps	Offshore Safe Depth	1, 2, 3, 4 meter lines	100/yr
Evacuation Maps	Max Current Maps by Scenario	Secondary Evacuation Lines	200/yr
Vertical Evacuation Analysis	3/6/9 Knot Current Maps (damage)	Forecast Amplitude (wave height)	500/yr
	3/6/9 Knot Time/Threshold of Maps (duration)	Storm Surge	1000/yr
	Directivity Analysis	Tide Level (daily)	2500/yr
		Error (modeling)	
		Run-Up (local)	

### California Tsunami Mapping Needs

 Completed

 In Process

# Ongoing Initiatives (support NOAA13 MES tasks)

## 1. Threat/Hazard Assessment

- a. Complete probabilistic tsunami hazard maps for an additional 30% of communities (100, 200, 500, 1000, 2500 Year Return Period Maps)

## 2. Public, Business and Media Preparedness for response to tsunami emergencies

- a. “Playbook” for planning evacuation zones/maps/plans for up to four less-than-worst-case (add’l geographic areas)
- b. Undertake detailed analysis of societal vulnerability (demographics, hospitals, schools, police fire, etc.) within the mapped tsunami inundation zone
- c. Develop and disseminate additional tsunami public education materials for commercial and recreational watercraft users.
- d. Leverage extensive 2014 Great Alaska Earthquake 50<sup>th</sup> Anniversary national level planning, continue to support the last week of March of each year as California Tsunami Awareness and Preparedness Week

# Ongoing Initiatives (support NOAA13 MES tasks)

- 3. State/Local Tsunami Warning dissemination & TsunamiReady Program maintenance and implementation**
  - a. Work with the National Weather Service Forecast Offices in California to assist local jurisdictions (cities and counties) in the planning, preparedness and mitigation activities that qualify them for TsunamiReady designation.
  - b. Support organized county/regional tsunami advocacy groups .
  - c. Assist local government in the purchase and deployment of tsunami signs.
  - d. Facilitate delivery of an online web interface tool and/or mobile phone application delivering real-time locally available enhanced amplitude, storm, run-up, expected error and arrival time for tsunamis in California
  - e. Continued sustainment of the California Tsunami Field Observation & Response Team.
- 4. Represent California in the National Tsunami Hazard Mitigation Program.**